

# Work Order ID 85309

**\*85309\***

June-05-12 3:34:29 PM

Item ID: D2432

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: 206 (24") Bearpaw

Start Date: 05/06/2012 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 19/06/2012 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/05 Tooling:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2432

Rev F3

120

0.00

**\*120\***

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut Blank as per D2432 File ✓

4 0

Jun 12-6-24

130

0.00

**\*130\***

HAAS CNC VERTICAL MACHINING #1

HAAS I

Memo

0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining  
2-Machine as per Folio and Dwg D2432 Identify as D2432F  
3-Deburr

25 12-07-04 (x4)

140

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*140\***

QC

Memo

0.00

Quality Control

25 12 07 04 (x4)

| WORK ORDER CHANGES |      |                  |    |      |     |                                     |                          |
|--------------------|------|------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE               | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|                    |      |                  |    |      |     |                                     |                          |
|                    |      |                  |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 85309

**\*85309\***

Page 2

June-05-12 3:34:29 PM

Item ID: D2432

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: 206 (24") Bearpaw

Start Date: 05/06/2012 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 19/06/2012 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

QC8- Inspect parts - second check

0.00

**\*150\***

QC

Memo

0.00

Quality Control

*OK 12/07/04*

*4*

151

Identify as per dwg & Stock Location:

0.00

**\*151\***

Packaging

Memo

0.00

Packaging

*PPP 85303*

*Res 12/7/6 (4)*

190

QC21- Final Inspection - Work Order Release

0.00

**\*190\***

QC

Memo

0.00

Quality Control

*OK 12/7/9*

*MF 12-07-06*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

June-05-12 3:34:33 PM

Page 1

Work Order ID: 85309

\*85309\*

Parent Item: D2432

\*D2432\*

Parent Item Name: 206 (24") Bearpaw

Start Date: 05/06/2012

Required Date: 19/06/2012

Start Qty: 4.00

Required Qty: 4.00

## Comments:

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

MUHMWB10

Purchased

No

120

sf

131.2100

3.7

14.8

\*MUHMWB10\*

\*\*

UHMW 1" Black

Jun 12-6-24

### Location

### Loc Qty

### Loc Code

MAT018

108.1

120972

1

121346

27.1

121954

80

MAT019

1.5

118814

1.5

ST052

21.60999474

121277

12.8

121278

8.80999474

121954

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

|                              |                |                     |       |
|------------------------------|----------------|---------------------|-------|
| <b>DART AEROSPACE LTD</b>    |                | <b>Work Order:</b>  | 85309 |
| <b>Description:</b> Bearpaw  |                | <b>Part Number:</b> | D2432 |
| <b>Inspection Dwg:</b> D2432 | <b>Rev:</b> F3 | <b>Page 1 of 1</b>  |       |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

| Inspection Sheet | Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|------------------|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| A                | 0.063 x 45°       | +0.030/-0.010 | .080             | ✓      |        | vern                 | IT-4     |
| B                | 5.500             | +/-0.030      | 5.501            | ✓      |        | htg "                |          |
| C                | 0.200             | +/-0.030      | .212             | ✓      |        | depth gauge          | IT-6     |
| D                | 0.25 x 45°        | +/-0.030      | .250             | ✓      |        | vern                 | IT-4     |
| E                | R0.250            | +/-0.030      | .250             | ✓      |        | rad gauge            |          |
| F                | 0.250             | +/-0.010      | .244             | ✓      |        | vern                 | IT-4     |
| G                | 0.625             | +/-0.030      | .620             | ✓      |        | "                    |          |
| H                | 0.375             | +/-0.010      | .378             | ✓      |        | "                    |          |
| I                | 0.950             | +0.030/0.010  | .964             | ✓      |        | "                    |          |
| J                | 19.000            | +/-0.030      | 19.000           | ✓      |        | Tape                 | IT-10    |
| K                | 3.14              | +/-0.030      | 3.128            | ✓      |        | vern                 | IT-4     |
| L                | 3.28              | +/-0.030      | 3.300            | ✓      |        | "                    |          |
| M                | Ø0.260            | +0.005/-0.000 | .260             | ✓      |        | "                    |          |
| N                | Ø0.93             | +/-0.030      | .926             | ✓      |        | "                    |          |
| O                | 0.30              | +0.030/-0.000 | .312             | ✓      |        | depth gauge          | IT-6     |
| P                | 23.750            | +/-0.030      | 23.750           | ✓      |        | Tape                 | IT-10    |
| Q                | 7.375             | +/-0.030      | 7.375            | ✓      |        | "                    |          |
| R                | 4.250             | +/-0.010      | 4.250            | ✓      |        | "                    |          |
| S                | 2.000             | +/-0.030      | 2.000            | ✓      |        | vern                 | IT-4     |
| T                | 9.000             | +/-0.010      | 9.000            | ✓      |        | Tape                 | IT-10    |
| U                | 9.000             | +/-0.010      | 9.000            | ✓      |        | "                    |          |
| V                | 0.375             | +/-0.010      | .380             | ✓      |        | vern                 | IT-10    |
|                  |                   |               |                  |        |        |                      |          |
|                  |                   |               |                  |        |        |                      |          |
|                  |                   |               |                  |        |        |                      |          |

|                     |          |                    |          |                            |     |
|---------------------|----------|--------------------|----------|----------------------------|-----|
| <b>Measured by:</b> | CT       | <b>Audited by:</b> | out      | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b>        | 12/07/04 | <b>Date:</b>       | 12/07/04 | <b>Date:</b>               |     |

| Rev | Date     | Change    | Revised by                       | Approved |
|-----|----------|-----------|----------------------------------|----------|
| A   | 04.01.09 | New Issue | P/O K10008/D206-559-015<br>KJ/RF | HT       |

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

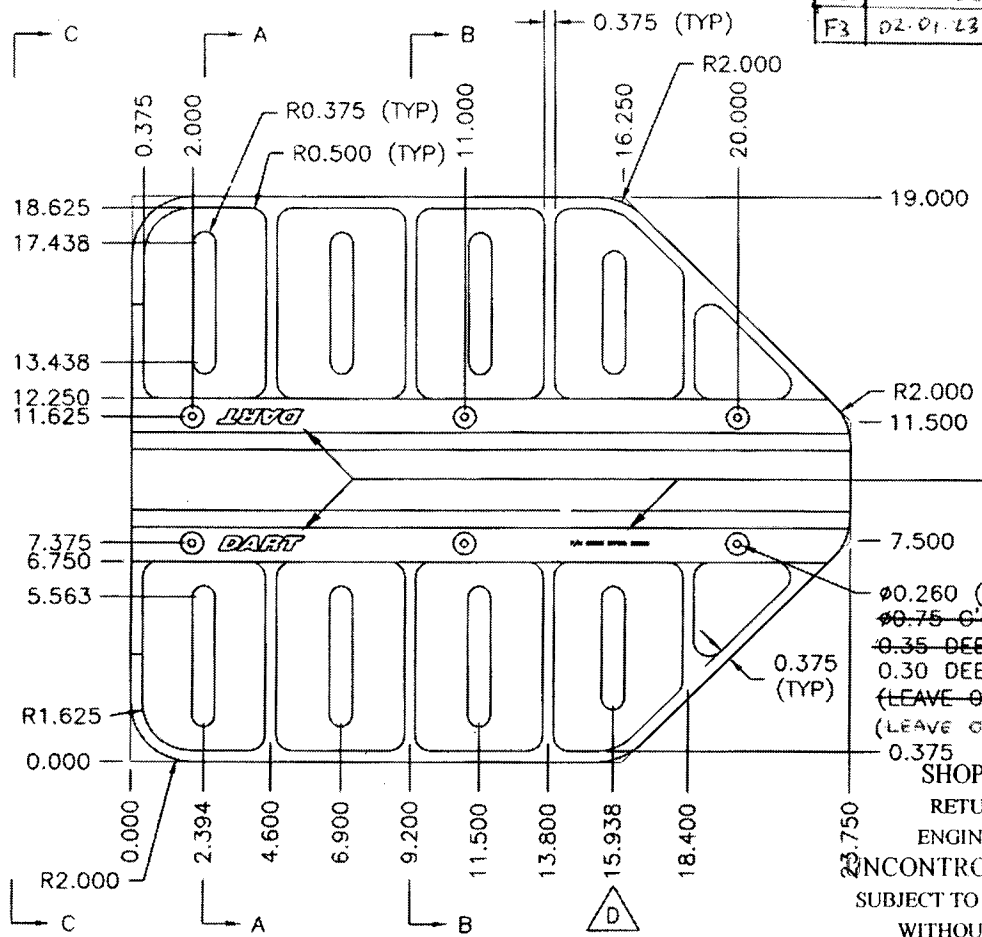


|    |          |                               |
|----|----------|-------------------------------|
| F1 | 99.03.03 | ADD DEC 9143                  |
| F2 | 01.03.28 | <del>Ø0.75 WAS Ø0.75</del> RF |
| F3 | 02.01.23 | CLARIFY BORE DIMS OF RF       |

RELEASED  
99.06.17 KE



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ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)

RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 85305 MLW  
12/06/05

| EFFECTIVE | DEOS |
|-----------|------|
| 9143      |      |

| DESIGN           | DRAWN BY        | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA | REV. F       |
|------------------|-----------------|---|--------------|
| KE               | KE              |   |              |
| CHECKED<br>MAY   | APPROVED<br>MAY | DRAWING NO.<br>D2432                              | SHEET 1 OF 2 |
| DATE<br>98.05.12 |                 | TITLE<br>BEARPAW                                  | SCALE<br>1:6 |
| A                | 95.10.31        | NEW ISSUE   |              |
| B                | 96.01.24        | RE-DESIGN   |              |
| C                | 96.03.26        | CHANGE BORE AND C'BORE DEPTH                      |              |
| D                | 96.06.04        | MOVE SLOT   |              |
| E                | 97.02.27        | CHANGE C'BORE DEPTH, BORE RADIUS                  |              |
| F                | 98.05.12        | CHANGE C'BORE, ADD B AND F P/N                    |              |

MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689  
1.00 THICK (MACHINE TO 0.950)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

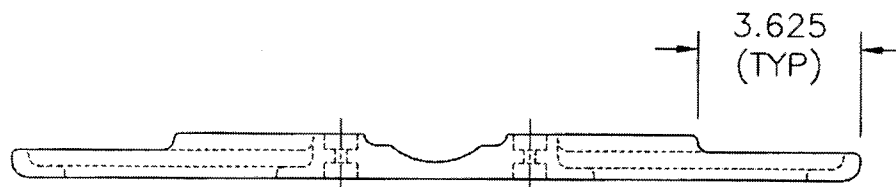
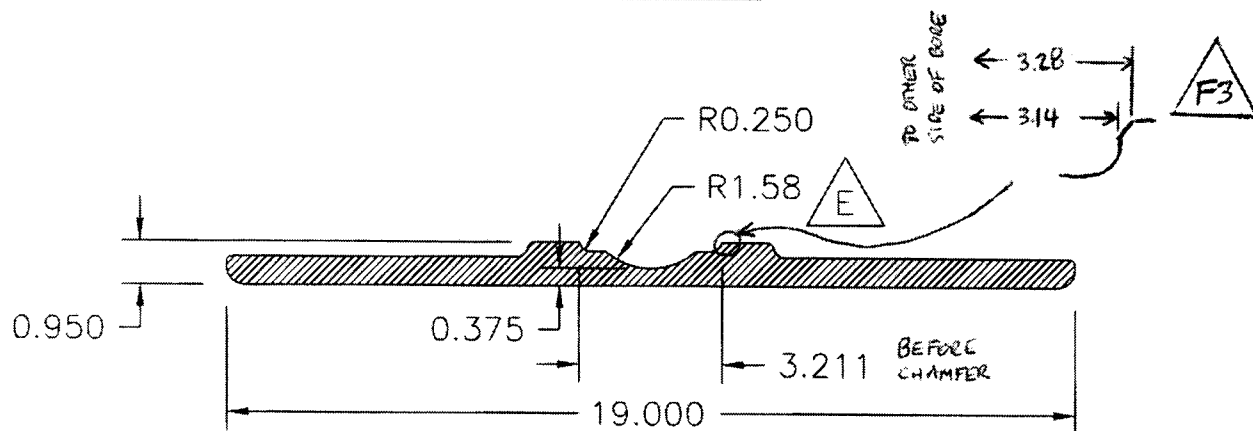
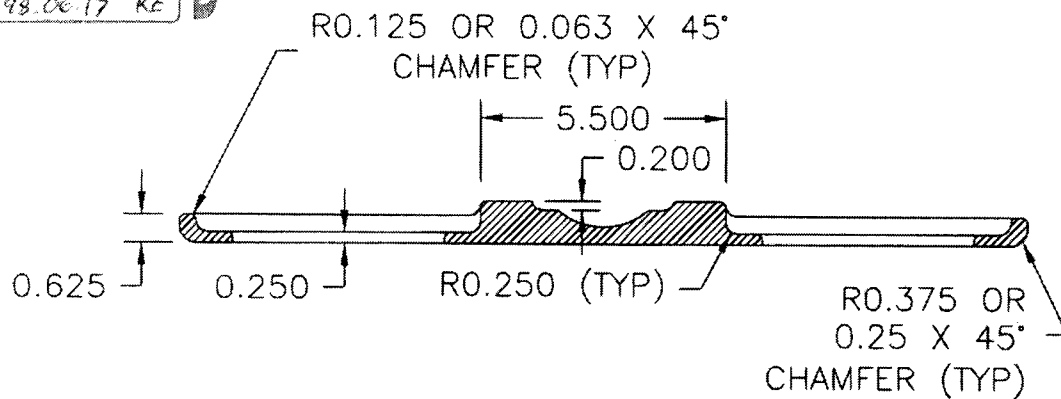
| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



|                        |                         |   |                        |
|------------------------|-------------------------|---|------------------------|
| DESIGN<br>KE           | DRAWN BY<br>KE          | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br>[Signature] | APPROVED<br>[Signature] | DRAWING NO.<br>D2432                              | REV. F<br>SHEET 2 OF 2 |
| DATE<br>98.05.12       |                         | TITLE<br>BEARPAW                                  | SCALE<br>1:4           |

RELEASED  
98.06.17 KE



SECTION C-C

85309

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries